

OIB - DC-8 11/17/16 Science Report

Aircraft:

[DC-8](#) ([See full schedule](#))

Date:

Thursday, November 17, 2016

Mission:

OIB

Mission Location:

English Coast, West Antarctica (English Coast 01)

Mission Summary:

Mission: English Coast 01 (priority: medium)

This is a new flight, primarily designed to map the bathymetry beneath the Stange Ice Shelf, and the western extremity of the George VI Ice Shelf, along a 20 km coast-parallel grid. This grid spacing improves to 10 km with the addition of the companion English Coast 02 mission. This grid connects with the Ferrigno-Alison coast-parallel grid in the west, and overlaps with the George VI grid in the east. We also fly a tie line along ICESat-1 track 0361.

Another straightforward weather decision today, with English Coast 01 being the strongest candidate with clear-sky observations (from the newly available satellite imagery) and forecast. A light off/cross-shore flow forecast held. PIG Arch was tempting, but a large front moving in from the north threatened the northern half of that survey. A higher stratus layer was observed at the southeastern end of today's survey, as predicted, but did not affect data collection. A cloud layer below our survey altitude at the northern end of the Stange Ice Shelf limited data collection there for ATM/FLIR/CAMBOT/DMS. ATM estimated 94% data coverage. Radar systems and gravimeter all performed well, which will lead to generation of vital new boundary conditions for these ice shelves. Together with the English Coast 02 mission last week, and ongoing collaborations with the British Antarctic Survey, we will have significantly advanced our understanding of this region during 2016 field campaigns.

All instruments performed well.

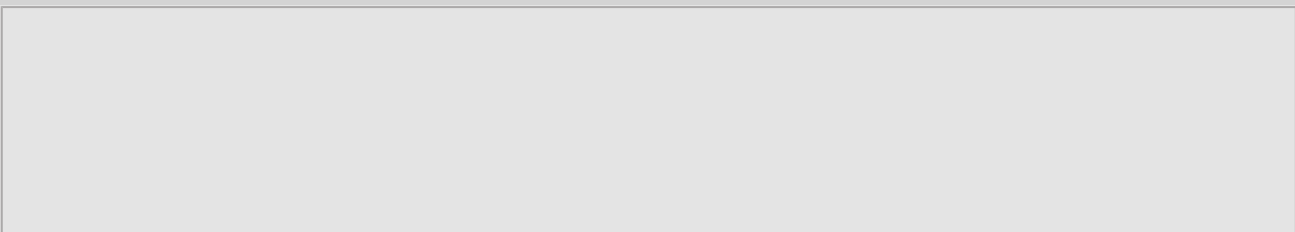
We conducted a ramp pass at 1200' on departure from PUQ.

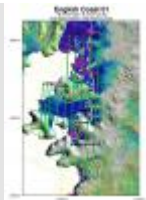
Attached images are:

1. Map of today's flight.
2. ATM T6 mapping of a crevasse field (NASA / Jim Yungel)
3. Iceberg near Spaatz Island (LDEO / Margie Turrin).
4. New sea ice with finger rafting next to older sea ice floes (NASA / Maria-José Viñas).
5. Sims Island in Stange Sound. There's a penguin colony in there, so IceBridge didn't approach it. (NASA / Maria-José Viñas)
6. Today's visitors onboard the DC-8 returning from a very successful flight, including NASA Associate Administrator Dava Newman, US Ambassador to Chile Carol Perez, and a film crew helmed by Rory Kennedy (NASA / Joe MacGregor)

Images:

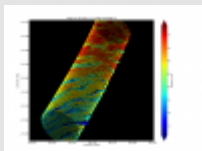
Map of today's flight





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ATM T6 mapping of a crevasse field



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Iceberg near Spaatz Island



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New sea ice with finger rafting next to older sea ice floes



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Sims Island in Stange Sound. There?s a penguin colony in there, so



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Today?s visitors onboard the DC-8 returning from a very successful



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Submitted by:

Joseph MacGregor on 11/19/16

Related Flight Report:

DC-8 11/17/16 - 11/18/16

Flight Number:

1162

Payload Configuration:

OIB-ATM NAV/ATM GPS/ATM-T5/T6/ATM FLIR/ATM CAMBOT MCoRDS/SNOW/Ku RADAR DMS/POS-AV GRAVIMETER & ARMAS (piggyback)

Nav Data Collected:

Yes

Total Flight Time:

11.1 hours

Submitted by:

Timothy Moes on 11/19/16

Flight Segments:

From:	SSCI - Punta Arenas	To:	SSCI - PUnta Arenas
Start:	11/17/16 12:56 Z	Finish:	11/18/16 00:02 Z
Flight Time:	11.1 hours		
Log Number:	178010	PI:	Nathan Kurtz
Funding Source:	Bruce Tagg - NASA - SMD - ESD Airborne Science Program		
Purpose of Flight:	Science		
Comments:	Overall the flight went well. DMS backup camera had issues staying online at the start of the flight but after up at altitude for a bit it came on and stayed on for the duration of the flight. Only lost a little bit of data on the last two lines of the mission due to some clouds but it was clear skies for the majority. They say 94% data collected. Media folks got a lot of video. Another successful flight with plenty of smiling folks onboard.		

Flight Hour Summary:

	178010
Flight Hours Approved in SOFRS	300
Total Used	306.9
Total Remaining	-6.9

178010 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining
10/04/16	1135	Science	4	4	296
10/05/16	1136	Science	2.7	6.7	293.3
10/12/16	1138	Transit	10.9	17.6	282.4
10/12/16	1139	Transit	3	20.6	279.4
10/14/16 - 10/15/16	1140	Science	10.9	31.5	268.5
10/15/16 - 10/16/16	1141	Science	11.8	43.3	256.7
10/17/16 - 10/18/16	1142	Science	11.8	55.1	244.9
10/20/16 - 10/21/16	1143	Science	11.4	66.5	233.5
10/22/16	1144	Science	11	77.5	222.5
10/24/16 - 10/25/16	1145	Science	11.5	89	211
10/25/16 - 10/26/16	1146	Science	11.3	100.3	199.7
10/26/16 - 10/27/16	1147	Science	12.1	112.4	187.6

10/27/16 - 10/28/16	1148	Science	11.5	123.9	176.1
10/28/16 - 10/29/16	1149	Science	11	134.9	165.1
10/31/16 - 11/01/16	1150	Science	11	145.9	154.1
11/02/16 - 11/03/16	1151	Science	11.2	157.1	142.9
11/03/16 - 11/04/16	1152	Science	11.5	168.6	131.4
11/04/16 - 11/05/16	1153	Science	11.1	179.7	120.3
11/05/16 - 11/06/16	1154	Science	11.7	191.4	108.6
11/07/16 - 11/08/16	1155	Science	11.2	202.6	97.4
11/09/16 - 11/10/16	1156	Science	11.7	214.3	85.7
11/10/16	1157	Science	10.9	225.2	74.8
11/11/16 - 11/12/16	1158	Science	11.3	236.5	63.5
11/12/16 - 11/13/16	1159	Science	11.1	247.6	52.4
11/14/16	1160	Science	10.9	258.5	41.5
11/15/16 - 11/16/16	1161	Science	11.6	270.1	29.9
11/17/16 - 11/18/16	1162	Science	11.1	281.2	18.8
11/18/16 - 11/19/16	1163	Science	11.1	292.3	7.7
11/21/16	1165	Transit	11.6	303.9	-3.9
11/21/16	1164	Transit	3	306.9	-6.9

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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